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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,705	09/27/2000	Gerhard Reichert	1663-L	6878

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EXAMINER

GOFF II, JOHN L.

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,705

Applicant(s)

REICHERT, GERHARD

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6, 8-17, 19-23, 25-28, 30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8-17, 19-23, 25-28, 30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is in response to Amendment D filed on 10/6/03. The previous 35 USC 112 rejections have been overcome.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3, 5, 6, 8-17, 19-23, 25-28, 30, and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding independent claims 1 and 19, the claims require "a primary sealant being a non-curable sealant". There is no disclosure in the specification as to the first sealant being a non-curable sealant. Regarding independent claim 26, the claim requires "the primary sealant being a thermoplastic material". While the specification does disclose specific thermoplastic primary sealant materials (See page 11, lines 1-6), the specification does not disclose/support the use of any thermoplastic primary sealant material.

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5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-3, 5, 6, 8-17, 19-23, 25, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Independent claims 1 and 19 require "a primary sealant being a non-curable sealant". It is unclear what is meant by a "non-curable sealant". Applicant is asked to clarify what is required by a "non-curable sealant". It is noted applicant appears for a "non-curable sealant" to be a "thermoplastic sealant" (See Amendment D, Page 9, lines 3-4), and this is the interpretation of the limitation used by the examiner.

Claim Rejections - 35 USC § 102

8. Claims 1, 5, 6, 9, 11-14, 26, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Town (U.S. Patent 6,002,521).

Town is directed to fabricating an insulating glazing unit. Town teaches the method comprises providing first and second glazing sheets, connecting a spacer (free of sealant) to the first and second glazing sheets using an adhesive such that an outwardly-facing channel is formed between the glazing sheets and the spacer and an insulating chamber is formed inward of the spacer between the glazing sheets, hermetically sealing the insulating chamber by applying a primary sealant into the outwardly-facing channel where the primary sealant extends entirely across the channel from the first glazing sheet to the second glazing sheet, and applying a secondary sealant into the outwardly-facing channel after the primary sealant is applied (Figures

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1-11 and Column 4, lines 53-57 and 64-67 and Column 8, lines 10-14 and 45-48 and Column 9, lines 46-60 and Column 10, lines 44-57 and Column 11, lines 42-53). Town teaches the spacer may be formed of materials well known in the art including metal (Column 8, lines 15-19), the spacer may have a pair of notched corners (Figure 10), and the spacer may carry a desiccant (Column 8, lines 23-25). Town teaches the primary sealant may comprise materials exhibiting good adhesion to metal or plastic spacers including polyisobutylene (a thermoplastic sealant) (Column 8, lines 56-58). Town teaches the secondary sealant may comprise materials exhibiting good moisture resistance such as silicone (thermosetting) resins and urethane adhesives (Column 9, lines 5-7).

Claim Rejections - 35 USC § 103

9. Claims 2, 3, 8, 10, 12, 19-23, 25, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Town as applied above in paragraph 7, and further in view of Hodek et al. (U.S. Patent 5,655,282).

As shown above, Town teaches all of the limitations in claims 2, 3, 8, 10, 12, 19-23, 25, 28, 30, and 31 except for a teaching on using a foam spacer and a teaching on using hot melt butyl sealant, low permeable sealant, and structural sealant. Hodek et al. are directed to an insulating glazing unit. Hodek et al. teach a pair of glass sheets separated by a spacer wherein the spacer is located inward from the perimeter of the glass sheets forming an outwardly-facing channel and an inward, insulating chamber (Figure 10 and Column 3, lines 21-29 and Column 7, lines 60-63). Hodek et al. teach first (154 of Figure 10) and second (155 of Figure 10) sealants applied to the spacer and glass sheets to provide a moisture barrier (Column 7, lines 63-66 and

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Column 8, lines 24-28). The first sealant may comprise a butyl adhesive (Column 11, line 31) including polyisobutylene (Column 11, lines 40-41), and/or a low permeable sealant (Column 8, lines 16-20). The second sealant may comprise a structural sealant made of a thermoset such as silicone (Column 8, lines 24-28). Hodek et al. further teach that it is well known in the art to use both foam and metal spacers carrying a desiccant (Column 4, lines 37-41 and 66-67), and it is known to use a spacer with a pair of notched corners (Figure 1).

Regarding claims 2, 3, 19, and 30, as shown above Hodek et al. teach that it was known to use a foam spacer carrying a desiccant, and one of ordinary skill in the art at the time the invention was made reading Town in view of Hodek et al. would have readily appreciated using in the method of Town a foam spacer as suggested by Hodek et al. as only the expected results would be achieved.

Regarding claims 8, 10, 12, 20, 22, and 28, as shown above Hodek et al. teach sealants comprising butyl adhesive (primary sealant), low permeable sealant (primary sealant), and structural sealant (secondary sealant) applied to the spacer and glass sheets. Absent any unexpected results, one of ordinary skill in the art at the time the invention was made reading Town in view of Hodek et al. would have readily appreciated using in the method of Town sealants comprising butyl adhesive, low permeable sealant, and structural sealant as suggested by Hodek et al.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Town as applied above in paragraph 8, and further in view of Schlienkamp (U.S. Patent 4,519,962).

As shown above, Town teaches all of the limitations in claim 15 except for a teaching on using first and second sealant stations comprising first and second application nozzles to apply

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the sealants. Schlienkamp teaches a method and system for sealing the edges of insulating-glass panels. The sealing method of Schlienkamp is a continuous process wherein a glass pane is conveyed to a sealing station (Column 3, lines 23-27). A sealing nozzle then applies adhesive to the entire perimeter of the glass pane (Column 3, lines 42-44). It would have been well within the purview of one of ordinary skill in the art at the time the invention was made apply the sealants taught by Town using multiple sealant stations of the type suggested by Schlienkamp as only the expected results would be achieved.

11. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Town as applied above in paragraph 8, and further in view of Battersby (U.S. Patent 3,759,771).

As shown above, Town teaches all of the limitations in claims 16 and 17 except for a teaching on using a device comprising first and second applicators wherein the second applicator trails that of the first to apply the sealants. Battersby is directed to a method of making an insulating glazing unit (double glazing unit) (Column 1, lines 54-63). Battersby teaches providing a pair of glazing sheets separated by a spacer wherein the spacer (free of sealant) is spaced inwardly from the perimeter of the sheets forming an outwardly facing channel and in inward insulating channel (Figures 1 and 5-7 and Column 2, lines 24-29 and 57-60). Battersby teaches sealing the insulating chamber by simultaneously applying a first and second sealant into the provided outwardly facing channel. The sealants are applied through an applicator with two heads wherein the second applicator head trails the first, thus the second sealant covers the first (Figures 2-4 and Column 2, lines 63-71 and Column 3, lines 1-2 and 11-17 and 40-45).

Battersby teaches that the first and second sealants may be different (Column 4, lines 16-23), and the sealants comprise a wide variety of materials including polyisobutylene, polyurethane, and

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thermosets (Column 3, lines 62-63 and Column 4, lines 7 and 12-13). Battersby teaches that the sealants prevent the entry of dust and/or moisture into the insulating chamber (Column 2, lines 30-34). Battersby further teaches that the spacer may be formed of metal, plastics, or wood and may include a desiccant (Column 2, lines 40-44), and the spacer may have notched corners between the glazing sheets and the spacer with the first sealant applied in the notched corners (Figures 2-6 and Column 2, lines 45-56).

Regarding claim 16, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the sealants taught by Town using a device comprising first and second applicators wherein the second applicator trails that of the first as suggested by Battersby as only the expected results would be achieved.

Regarding claim 17, it is noted that in the method and apparatus of Battersby a retractable applicator nozzle is not necessary. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a retractable first nozzle if the nozzle would disturb the application of the second sealant.

Response to Arguments

12. Applicant's arguments with respect to claims 1-3, 5, 6, 8-17, 19-23, 25-28, 30, and 31 have been considered but are moot in view of the new ground(s) of rejection. It is noted the rejection of claim 19 and its dependent claims is now part of the 35 USC 103 rejection in paragraph 9 as opposed to previously being a part of the 35 USC 102 rejection in paragraph 8 as claim 19 was amended to require "a foam-bodied, desiccant-carrying spacer". Further, it is

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noted claim 12 is rejected under the 35 USC 102 rejection in paragraph 8. Erroneously, it was previously omitted from the rejection heading.

Applicant argues "The Applicant has amended each of the independent claims to specifically recite that the primary sealant is a non-curable or thermoplastic adhesive. The independent claims have also been amended to specifically recite that the secondary sealant is a curable or thermoset material. The Applicant submits that the Town reference discloses, teaches, and suggests the opposite arrangement wherein the curable material is used as the primary sealant with the secondary sealant being the non-curable sealant". The 35 USC 112 rejections in paragraphs 3-7 are noted. Furthermore, it is noted Town teaches using polyisobutylene as the primary sealant. Polyisobutylene is a thermoplastic (See Column 3, lines 71 and 72 and Column 4, line 7 of Battersby). Additionally, Town teaches using silicone resins and polyurethane adhesives as the secondary sealant. Silicone resins and polyurethane adhesives are thermosetting (See applicants specification page 11, lines 7-10).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481** (after December 2003 the telephone number will be 571-272-1216). The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
December 3, 2003



JEFF W. AFTERGUT
PRIMARY EXAMINER
GROUP 1300